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ABSTRACT

This report provides a summary of weekly test data and comprehensive tests covering the last half of the material included in the 1970-1971 tryout of the First-Grade Spelling Program. It also provides a comparison of posttest performance of tryout participants and reference groups. Southwest Regional Laboratory (SWRL) Technical Note 3-71-06 is required reading to place this document in context. (Author)

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This report provides a summary of weekly test data and comprehensive tests covering the last half of the material included in the 1970-1971 tryout of the First-Grade Spelling Program. It also provides a comparison of posttest performance of tryout participants and reference groups. TN 3-71-06 is required reading to place this document in context.

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END OF YEAR TEST RESULTS FOR THE 1970-1971 FIRST-GRADE SPELLING TRYOUT

This report includes results obtained from weekly comprehensive tests covering the last half of the program material. It also includes posttest results. Results for the first 11 weeks of the tryout are reported in TN-3-71-06.

Although program materials were used in four classes, only one class reached Lesson 21, the final unit of study. The other three classes reached Lessons 17, 18 and 19.

The comparison group also consisted of four classes. Although all four comparison classes received some spelling instruction, only one class was tested regularly on material studied. The amount of time devoted to spelling in comparison classes varied from approximately 30 minutes to one hour per week as opposed to an average of 30 minutes a day on four days a week for program participants.

Weekly Test Performance

Weekly test results for study items are presented in Table 1. Each entry in Table 1 is based on a total of 10 items, with at least one item selected from each of the program outcomes represented in the current study list. Transfer data are reported in Table 2. Percentages in Table 2 are based on two transfer words per study list. Detailed information regarding performance on individual words is reported by Schwab in TN-2-71-21.

Study Items. The data in Table 2 indicate that overall performance on the last block of material varied between 77% and 88% over lessons.

In general, scores tended to be lower than on earlier material. While overall performance measures showed that students spelled 85% or more of the study items correctly on seven of the first nine weekly tests, this level was achieved only once during the period between the twelfth and the twenty-first week of instruction.

Although decrements occurred both among students reading in the Transition Program (TP) and among those reading in the Second-Year (SY) Program, the lower overall averages seem primarily attributable to the performance of TP students. Where individual class scores on the first nine program lessons ranged from 50% to 100% for TP students, for the final block of material the range was from 35% to 100%. As was the case on preceding tests, the very high TP scores were typical of only those students in Class T-1, and the very low TP scores, of only those students in Class T-4 (see Table 1).

For the combined SY group, weekly test scores varied between 82.74% and 91.73%, a range which is within 3 percentage points in either direction of the boundary values obtained on tests covering the first block of material. Paralleling earlier test results, in all but three instances SY scores exceeded 80%. In addition, Class T-1 again showed exceptional performance, achieving scores of 93% or better except on the final lesson, which received less study time than usual because it was introduced during the last week of the school year.

Transfer Items. Transfer scores also exhibited a decline from levels obtained on earlier tests. As Table 2 shows for the tryout group as a whole, scores ranged from 50.65% (approximately 13% below the comparable figure for Lessons 1 through 10) to 74.77% (approximately

5% below the figure for Lessons 1 through 10). Over lessons, average SY scores varied between 59.23% and 81.93%. TP scores varied between 22.22% and 58.00%. With the exception of Class T-1, SY scores in individual classes rarely exceeded 75% and TP scores rarely exceeded 50% (see Table 2).

Comparisons of data in Tables 1 and 2 indicate that performance on study items averaged 6% to 23% higher than performance on transfer items appearing on the same test. Schwab's report (TN-2-71-21) indicates that on the average, study items were spelled correctly 81% of the time, while transfer items were spelled correctly only 66% of the time. Because performance in Class T-1 was quite good in general, differences in study and transfer percentages were of smaller magnitude than averaged statistics might suggest.

Performance on Review Test 3

The third comprehensive test, hereafter referred to as Review Test 3 or Test R-3, was administered during the sixteenth week of the tryout. Like the other comprehensive tests, it consisted of 16 items which were distributed among outcome categories in proportion to the relative frequency with which each outcome occurred in preceding lessons. The content of Test R-3 is listed as a function of outcome in Appendix A. Test results are presented in Table 3.

As Table 3 shows, the percentage correct for SY students was 73.75%; for TP students, 46.50%; and for all students, 67.57%. As these figures indicate, on the average, total scores were 5% to 6% lower than on the comprehensive test which was administered five weeks earlier.

Substantial SY/TP differences (which ranged from 24% to 48%) occurred on all outcomes and in all classes except Class T-1, where only elements showed an SY advantage of this magnitude.

Although the decline of total scores was small, sight words and elements showed an overall decrease of 13% and 16%, respectively. Transfer words, in contrast, showed a 4% increase from the preceding review test. Although there was considerable variation in the scoring patterns of the various groups of students, regular words were spelled correctly most often in most comparisons. Moreover, the lowest scores occurred on transfer words in only two cases (Class T-3, and TP students in Class T-4). Although absolute scores showed no substantial improvement on transfer words, the latter finding is particularly interesting in view of the sizeable losses which occurred on other outcomes, and the fact that on all preceding tests transfer items were spelled incorrectly more often than other items.

Posttest Performance

The posttest was administered to all tryout and comparison classes during the second week in June. The test consisted of 32 items, with eight items representing each program outcome. The content of the post-test appears in Appendix B. Test results are presented in Table 4.

Entries in Table 4 are labeled to indicate pairing of tryout and reference classes. The letters T and C denote tryout and comparison groups, respectively. The digit in each letter-number code indicates the rank assigned to a particular class on the basis of total pretest scores. Because these ranks were used in matching classes, labels also indicate

pairings. Thus, the labels T-1 and C-1, for example, refer to the top tryout and comparison classes, respectively.

As Table 4 shows, the performance of the tryout group averaged 61.73%, a figure which represents a decline from the level observed on Test R-3, which preceded the posttest by three to five weeks. However, this figure does represent a 28% improvement over pretest performance. As the combined data show, for tryout classes, the greatest pre- to posttest gains, which were on the order of 30%, occurred for elements, regular words, and transfer words. For comparison classes, regular words and transfer words showed gains of 16% and 13%, respectively, while for other outcomes, increments were less than 10%.

Given the close correspondence between pretest scores of tryout and comparison groups, these data indicate that SWRL instructed groups performed better on all outcomes. In fact, tryout group superiority was demonstrated in 24 of the 28 comparisons involving matched pairs of cells in Table 4 (e.g., SY transfer scores in Class T-1 vs. SY transfer scores in Class C-1.)

In spite of the relatively better performance of tryout students, the need for program improvement is indicated by a number of other findings. First of all, comparisons of individual entries in Table 4 show that, of the four tryout classes, only Class T-1 scored near the 80% level on all outcomes. Tryout group performance was such that one class, T-3, which consisted entirely of SY students, performed at a level quite close to the average of SY and TP comparison students. Furthermore, scores of one comparison class, C-1, fell well within the range of tryout scores.

Summary

Weekly test data indicated that performance on Lessons 12 through 21 was somewhat lower than on lessons 1 through 10. The range of scores on study items from 77% to 88%, was approximately 3% lower than on the first half of the program material. The lower boundary of transfer scores, which was 50.65%, represented a drop of approximately 13% from earlier levels. Consistent with the pattern established earlier, study items were spelled correctly considerably more often than transfer words.

The results of the sixteenth week comprehensive test showed a decline from the level achieved on the preceding review test. Results of the posttest, which occurred from three to five weeks following the week 16 review showed further losses.

In spite of the fact that performance decrements occurred on each succeeding comprehensive test, posttest data showed that the tryout group was superior to the comparison group. Although this general trend held for all matched pairs of tryout and comparison classes, the performance of the reference class which received the most intensive non-SWRL spelling instruction was roughly equivalent to that of three of the four tryout classes.

In view of the latter findings and the relatively unimpressive absolute level of posttest performance demonstrated by tryout classes, it appears that program effectiveness must be upgraded. The fact that tryout groups showed the least pre- to posttest gain on sight words suggests that in addition to considering alternatives to the current word-attack procedures, more effective techniques for teaching irreguarly spelled words should be considered.

References

Butler, Patricia A. Interim report for the 1970-1971 first-grade spelling tryout. Technical Note No. TN-3-71-06, Southwest Regional Laboratory, Inglewood, California.

Schwab, Donna. An analysis of spelling errors in the 1971 tryout of a first-grade spelling component. Technical Note No. TN-2-71-21, Southwest Regional Laboratory, Inglewood, California.

TABLE 1

Scores for Weekly Study Items [1] as a Function of Reading Level [2] Mean Percent Correct for each Tryout Class[3]

		TP	SY	Both
Class T-1				
Lesson:	12	85.00	94.74	92.40
	13	95.00	98.89	97.92
	14	95.00	93.68	94.00
	15	84.00	97.22	94.35
	16			
	17	94.00	97.65	96.82
	18	82.00	96.88	93.33
	19	100.00	99.41	99.55
	20	88.00	93.75	92.38
	21	67.50	85.88	82.38
Class T-2				
Lesson:	12		75.71	
	13		78.89	
	14		88.08	
	15		80.97	
	16			
	17		90.77	
	18		79.29	
	19		68.93	
Class T-3				
Lesson:	12	66.00	80.00	77.41
	13	75.00	94.09	90.00
	14	70.00	89.50	84.44
	15	68.33	91.58	85.00
	16			
	17	90.00	88.10	88.57

Table 1 (continued)

		TP	SY	Both
Class T-4				
Lesson:	12	37.27	84.67	64.62
	13	39.09	75.71	59.60
	14	40.83	89.38	68.57
	15	35.00	85.00	64.17
	16			
	17	57.69	91.76	77.00
	18	46.92	83.33	66.43
All Tryout Classes[4]				
Lesson:	12	56.82	82.74	77.36
	13	63.04	86.91	81.63
	14	62.00	90.00	83.40
	15	56.19	87.56	81.40
	16			
	17	74.00	91.73	87.55
	18	56.67	85.08	78.44

[1]Transfer data for weekly lessons appear in Table 3.

[2]TP and SYCSP refer to the Transition and Second-Year Reading Programs, respectively.

[3]Lesson 16 consisted of a review whose content differed for each class. Thus, no averages were tabulated.

[4]Data in this section have been compiled only in cases for which two or more groups in each grading period completed a particular lesson.

TABLE 2

Scores for Weekly Transfer Items[1]: Mean Percent Correct as a Function of Reading Level[2] for Each Tryout Class[3]

		TP	SY	Both
Class T-1				
Lesson:	12	75.00	86.84	84.00
	13	75.00	94.44	89.58
	14	66.67	86.84	82.00
	15	100.00	88.89	91.30
	16			
	17	80.00	97.06	93.18
	18	20.00	65.63	54.76
	19	80.00	97.06	93.18
	20	70.00	75.00	73.81
	21	25.00	58.82	52.38
Class T-2				
Lesson:	12		58.93	
	13		66.67	
	14		73.08	
	15		87.10	
	16			
	17		75.00	
	18		57.14	
	19		53.57	
Class T-3				
Lesson:	12	30.00	38.64	37.04
	13	25.00	79.55	67.86
	14	50.00	80.00	72.22
	15	33.33	73.68	64.00
	16			
	17	50.00	73.81	67.86

Table 2 (continued)

		TP	SY	Both
Class T-4				
Lesson:	12	4.55	63.33	38.46
	13	22.73	71.43	50.00
	14	58.33	81.25	71.43
	15	25.00	75.00	57.14
	16			
	17	26.92	79.41	56.67
	18	23.08	56.67	41.07
All Tryout Classes[4]				
Lesson:	12	29.53	60.71	54.25
	13	36.96	77.16	68.27
	14	58.00	79.63	74.53
	15	45.24	81.93	74.77
	16			
	17	44.00	80.25	71.70
	18	22.22	59.32	50.65

[1]Tabulations for weekly study items appear in Table 2.

[2]TP and SY refer to the Transition and Second-Year Reading Programs, respectively.

[3]Lesson 16 is omitted because it consisted of a review composed of different items in each class.

[4]Data in this section have been compiled only in cases for which two or more groups in each grading period completed a particular lesson.

TABLE 3

Scores for Mid-year Test 3:
Mean Percent Correct as a Function of Reading Level[1] for Tryout Classes

	N	Elements	Regular Words	Transfer Words	Sight Words	Total Score
Class T-1						
TP	5	35.00	77.50	80.00	70.00	66.25
SY	19	82.84	91.45	86.84	86.84	88.16
Both	24	72.92	88.54	85.42	83.33	83.59
Class T-2						
SY	29	40.52	70.69	37.93	60.34	57.76
Class T-3						
TP	8	53.13	45.31	37.50	18.75	42.97
SY	21	77.38	85.71	85.71	66.67	81.25
Both	29	70.69	74.57	72.41	53.45	70.69
Class T-4						
TP	12	41.67	44.79	29.17	33.33	40.63
SY	16	73.44	81.25	62.50	71.88	75.78
Both	28	59.82	65.63	48.21	55.36	60.71
All Tryout Classes						
TP	25	44.00	51.50	42.00	36.00	46.50
SY	85	65.29	81.03	65.29	70.00	73.75
Both	110	60.45	74.32	60.00	62.27	67.57

[1]TP and SYCSP refer to the Transition and Second-Year Reading Programs, respectively.

TABLE 4

Scores for Posttest
Mean Percent Correct as a Function of Reading Level[1] for Tryout Classes

	N	Tryout Group: Elements	Regular Words	Transfer Words	Sight Words	Total Score
Class T-1						
TP	8	89.06	78.13	76.56	81.25	81.25
SY	10	97.50	87.50	90.00	82.50	89.38
Both	18	93.75	83.33	84.03	81.94	85.76
Class T-2						
SY	27	61.11	47.69	41.20	52.31	50.58
Class T-3						
TP	7	26.79	37.50	26.79	41.07	33.04
SY	22	78.98	71.02	64.77	71.02	71.45
Both	29	66.38	62.93	55.60	63.79	62.18
Class T-4						
TP	9	50.00	33.33	19.44	40.28	35.76
SY	15	82.50	78.33	65.83	73.33	75.00
Both	24	70.31	61.46	48.44	60.94	60.29
All Tryout Classes						
TP	24	56.25	49.48	40.63	54.17	50.13
SY	81	74.69	64.20	56.79	64.97	65.16
Both	105	70.48	60.83	53.10	62.50	61.73

[1]TP and SYCSP refer to the Transition and Second-Year Reading Programs, respectively.

TABLE 4 (continued)

Comparison Group

	N	Elements	Regular Words	Transfer Words	Sight Words	Total Score
Class C-1						
TP	5	45.00	35.00	22.50	35.00	34.38
SY	18	79.86	72.92	63.89	69.44	71.53
Both	23	72.28	64.67	54.89	61.96	63.45
Class C-2						
SY	18	38.19	31.25	29.17	43.75	35.59
Class C-3						
TP	14	31.25	28.57	19.64	38.39	29.46
SY	8	45.00	75.00	35.00	65.00	55.00
Both	19	34.87	40.79	23.68	45.39	36.18
Class C-4						
TP	20	33.13	43.13	36.88	50.00	40.78
SY	1	25.00	62.52	87.50	100.00	68.75
Both	21	32.74	44.05	39.29	52.38	42.11
All Comparison Classes						
TP	39	33.97	36.86	28.85	43.91	35.90
SY	42	56.55	55.06	46.13	58.63	54.09
Both	81	45.68	46.30	37.81	51.51	45.33

[1]TP and SY refer to the Transition and Second-Year Reading Programs, respectively.

APPENDIX A

Content of Comprehensive Test 3

Elements[1]	Regular Words[1]	Transfer Words[2]	Sight Words[1]
ack (12)	fast (3)	tame (2, 12)	eat (6)
eet (14)	top (4)	wake (10, 12)	house (15)
ell (7)	runs (8)		
ug (8)	thin (9)		
	same (12)		
	nine (13)		
	help (14)		
	cube (15)		

[1]A single number in parentheses indicates lesson from which the study item was sampled.

[2]Two numbers in parentheses indicate lessons from which the constituent elements of the transfer item were sampled.

APPENDIX B

Content of the Posttest

Elements[1]	Regular Words[1]	Transfer Words[2]	Sight Words[1]
m (2)	am (1)	tug (2, 8)	do (4)
ast (3)	dot (4)	pop (3, 4)	eat (6)
ed (6)	beg (6)	fill (3, 10)	zoo (10)
ill (10)	just (8)	shame (4, 12)	which (12)
z (10)	thin (9)	vine (9, 13)	happy (12)
eed (14)	ride (13)	west (10, 7)	does (13)
ake (12)	feel (14)	brand (17, 3)	here (14)
oke (15)	thing (17)	choke (17, 15)	out (15)

[1]A single number in parentheses indicates lesson from which the study item was sampled.

[2]Two numbers in parentheses indicate lessons from which the constituent elements of the transfer item were sampled.